**BEYOND ANTI-VIRAL EFFECTS OF CHLOROQUINE/HYDROXYCHLOROQUINE**

**Section: MINI REVIEW**

**Supplementary materials**

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**FIGURE**

**FIGURE S1. CQ and HCQ inhibit *in vitro* autophagy, TLR-dependent cellular activation and cytokine production.** **(A)** CQ and HCQ are synthetic antimalarial drugs and weak bases with a common flat aromatic core structure. **(B)** CQ/HCQ impairautophagosome–lysosome fusion, consequently LC3-II accumulates under CQ/HCQ incubation (1–3). Histograms represent LC3 molecules MFI in monocytes or T cells from PBMCs of HDs, in the presence or absence of HCQ (60µM), after *in vitro* incubation for 2 hours. **(C)** CQ/HCQ inhibit endosomal TLR activation and impair costimulatory molecules expression (4–6). Histograms represent CD86 molecules MFI on B cells from PBMCs of HD, in the presence or absence of HCQ (20µM), after no stimulation or *in vitro* stimulation with imiquimod (2µg/mL; TLR7 ligand), CpG (0,5µg/mL; TLR9 ligand) or pokeweed mitogen as control (2µg/mL) for 48 hours. **(D and E)** HCQ decreases IFNs production (7–9).Levels of IFNs (type I and II) were measured in culture supernatants from HDs PBMCs or pDCs, pretreated during 1 hour with increasing or fixed (20µM) concentration of CQ, then stimulated with R848 (5µg/mL; TLR7/8 agonist) for 24 hours. IFNs quantification was performed with the STING-37 reporter cell line. **(F)** CQ/HCQ incubation lead to several other cytokine secretion inhibition (7,9–12). PBMCs from HDs were preincubated or not during 1 hour with CQ (20µM), then stimulated with R848 (5µg/mL; TLR7/8 agonist) for 16 hours and analysed by mass cytometry. CQ: chloroquine; HCQ: hydroxychloroquine; HD: healthy donor; IFN: interferon; mDC: myeloid dendritic cell; MFI: median of fluorescence intensity; NS: non-stimulated; PBMC: peripheral blood mononuclear cells; pDC: plasmacytoid dendritic cell.

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